

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Seattle City Light )

Project No. 2705-003

ORDER ISSUING NEW LICENSE  
(Issued February 7, 1997)

On September 30, 1992, Seattle City Light (City) filed an application pursuant to Sections 4(e) and 15 of the Federal Power Act (FPA) 1/ for a new license authorizing the continued operation and maintenance of the 2,125-kilowatt (kW) Newhalem Creek Hydroelectric Project. The project occupies 6.56 acres within the Ross Lake National Recreation Area, and is located on Newhalem Creek, a tributary of the Skagit River, near the town of Newhalem, in Whatcom County, Washington.

The Newhalem Project began operation in 1921 to provide power for construction of the Skagit River Project (FERC No. 553) and the company camp at Newhalem. The project's current license was issued January 20, 1975, effective January 1, 1970. 2/ The license expired December 31, 1994, and since that time the City has been operating under annual licenses.

The City proposes no new construction or capacity increase for the project.

## I. BACKGROUND

The Commission issued a public notice soliciting motions to intervene for the project on October 15, 1993. The following entities filed timely interventions: the Washington Department of Fish and Wildlife (WFW); the U.S. Department of the Interior (Interior); the National Marine Fisheries Service (NMFS); the Washington Department of Ecology (Ecology); the Skagit System Cooperative (Cooperative); and a consortium of groups including American Rivers, Friends of the Earth, Rivers Council of Washington, and North Cascades Conservation Council (American Rivers). The motions have been granted.

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1/ 16 U.S.C. 807

2/ see City of Seattle, 53 FPC 207

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The Commission then issued a public notice on March 3, 1995, indicating that the project was ready for environmental analysis and soliciting comments, recommendations, and terms and conditions. The following entities responded: Interior, WFW, the Cooperative, and American Rivers.

The Commission issued the draft environmental assessment (EA) for the project on June 26, 1996, which recommends that the project be licensed with certain additional enhancement measures, and found that licensing the project, with these additional measures, would not constitute a major federal action significantly affecting the quality of the human environment. The following five entities commented on the draft EA: Ecology, WFW, the City, the Cooperative, and Interior.

The Commission issued the final EA for the project on November 22, 1996, which is incorporated by reference in this license. WFW and the Cooperative filed comments on the final EA.

The staff also prepared a Safety and Design Assessment for this project, which is available in the Commission's public file.

In determining whether, or under what conditions, to issue this license, we have fully considered the comments filed by the intervenors and other interested parties.

## II. PROJECT DESCRIPTION

The Newhalem Project consists of a 45-foot-long, 10-foot-high dam; a 2,700-foot-long tunnel; a 500-foot-long penstock; a powerhouse containing one Pelton impulse turbine with a generating capacity of 2,125 kW; a 350-foot-long tailrace releasing water to the Skagit River; and a 4,387-foot-long transmission line. The City proposes to continue operating the project run-of-river.

A more complete project description is contained in ordering paragraph B(2).

## III. APPLICANT'S PLANS AND CAPABILITIES

In accordance with Sections 10(a)(2)(C) and 15(a) of the FPA, 3/ we evaluated the City's record as a licensee with respect to the following: (1) conservation efforts; (2) compliance history and ability to comply with the license; (3) safe management, operation, and maintenance of the project; (4)

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3/ 16 U.S.C. 803(a)(2)(c) and 808(a)

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ability to provide efficient and reliable electric service; (5) need for power; (6) transmission service; (7) cost-effectiveness of plans; and (8) actions affecting the public.

The results of our evaluation follow.

#### 1. Conservation Efforts

The City encourages its customers to conserve electricity by offering different incentive programs designed to reduce their electrical usage. The Washington Utilities and Transportation Commission, which has statutory and regulatory authority regarding least-cost planning and energy conservation, has no specific statute regarding conservation planning in Washington.

The Newhalem Project complies with the development plans and programs of the Pacific Northwest Electric Power and Conservation Planning Council and its Regional Energy Plan.

We find that the City is making a good faith effort to encourage conservation.

#### 2. Compliance History and Ability to Comply with the New License

We have reviewed the City's compliance with the terms and conditions of the existing license. We find that the City's overall record of making timely filings and compliance with its license is satisfactory. Therefore, we believe the City can satisfy the conditions of a new license.

#### 3. Safe Management Operation and Maintenance of the Project

The project dam and appurtenant facilities are subject to the Commission's regulations concerning project safety. We have reviewed the City's management, operation and maintenance of the project pursuant to the requirements of our regulations and the associated Engineering Guidelines, including all applicable safety requirements such as warning signs, boat barriers, and fencing. We conclude that the project is being safely managed, operated, and maintained.

#### 4. Ability to Provide Efficient and Reliable Electric Service

All records indicate that the City has operated the project in an efficient and reliable manner. Lost generation because of unscheduled outages is not significant compared to the annual generation for the Newhalem Project. Therefore, we believe that the project is, and under the new license will continue to be, operated and maintained in an efficient and reliable manner.

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#### 5. Need for Power

The City, a publicly-owned electric utility, serves an average load of about 1,110 megawatts (MW). While the City meets a major part of its load (about 75 percent) with owned and contracted resources, it's still deficient for energy and capacity, and therefore purchases power from Bonneville Power Administration.

The City's 1992 energy resource strategy recommends acquiring 200 MW of new resources by 2003.

The Northwest Power Planning Council's power plan shows a need for more power is likely to exist in the Pacific Northwest during the 1990's. Firm energy provided by the project would be useful in meeting a part of the projected need.

Since 1921, the Newhalem Project has been meeting part of the City's power needs. If relicensed, the project would continue to meet part of the City's power needs and a small part of the region's needs. In addition, the project would continue to displace fossil-fueled electric power generation the regional utilities now use, and thereby conserve nonrenewable fossil fuels and reduce the emission of noxious byproducts caused by the combustion of fossil fuels.

#### 6. Transmission Service

The City proposes no changes in the transmission network affected by the Newhalem Project operation. We find that the existing transmission system is sufficient.

#### 7. Cost Effectiveness of Plans

The City looked at different alternatives for replacing and upgrading project turbines and found one alternative that should be further studied. Article 301 requires the City to study the feasibility of upgrading the generating capacity at the project.

#### 8. Actions Affecting the Public

The Newhalem Project generates electricity which is used to serve the City's customers. It also provides opportunities for hiking, fishing, and other recreational benefits. Therefore, continued operation of the project will benefit the public.

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#### IV. WATER QUALITY CERTIFICATION

Under Section 401(a) of the Clean Water Act (CWA), 4/ the Commission may not issue a license for a hydroelectric project unless the state certifying agency has either issued a water quality certification for that project or has waived certification by failing to act on a request for certification within a reasonable period of time, not to exceed one year. 5/

The City requested water quality certification for the Newhalem Project on January 20, 1995, and Ecology granted the request on January 8, 1996. Ecology submits the certification conditions with caveats, enumerated in a cover order, that go beyond the authority granted in the CWA. 6/ Ordering paragraphs 4, 5, and 6 contained in the cover order allow the state to determine when the certification would cease to be valid, giving the state authority it does not have under the CWA. There are discrete instances when certification ceases to be valid and those instances are expressly contained in Section 401(a)(3) of the CWA. 7/

The certification conditions attached to Ecology's cover order are water quality related and do not appear to be inconsistent with the recommendations of the EA. The conditions are attached as Appendix A to this order. 8/

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4/ 33 U.S.C. 1341(a)(1)

5/ Section 401(a) of the CWA requires an applicant for a federal license or permit to conduct any activity which may result in any discharge into navigable waters to obtain from the state in which the discharge originates certification that any such discharge will comply with applicable water quality standards.

6/ Great Northern Paper, Inc., 77 FERC 61,068 (1996)

7/ Keating v. FERC, 927 F.2d 616 (D.C. Cir. 1991)

8/ By letter dated August 5, 1996, Ecology clarified its original instream flow conditions to require the project to release the prescribed instream flows, or inflow, whichever is less, recognizing that only natural flows are available to the project.

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#### V. COASTAL ZONE MANAGEMENT ACT

Since the Newhalem Project is located in a designated coastal zone, Ecology must first issue certification that the project is consistent with the Washington Coastal Management Program (Coastal Program) before the Commission can issue a license.

On September 28, 1992, the City filed a consistency determination with Ecology. Ecology asked the City to provide additional information, which they did. On February 21, 1996, the City refiled its consistency determination with Ecology. On February 28, 1996, Ecology concurred with their findings.

#### VI. COLUMBIA RIVER BASIN FISH AND WILDLIFE PROGRAM

As part of the Columbia River Basin Fish and Wildlife Program (Program), the Northwest Power Planning Council has designated over 40,000 miles of river in the Pacific Northwest region as not being suitable for hydroelectric development ("protected area"). The Newhalem Project is not located in a protected reach.

#### VII. FISH PASSAGE

Section 18 of the FPA states that the Commission shall require construction, maintenance, and operation by a licensee of such fishways as the Secretaries of U.S. Department of Commerce (Commerce) and Interior may prescribe. Neither Commerce nor Interior prescribed fishways for this project, though Commerce recommends that the City be required to provide fishways at the Newhalem Project if they do prescribe them in the future.

We recognize that future fish passage needs and management objectives may not be ascertained before the license is issued. Therefore, article 401 of this license reserves the Commission's authority to require any fishways that the Secretary of Commerce may prescribe in the future.

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#### VIII. THREATENED AND ENDANGERED SPECIES

The following federally-listed species may occur in the project area: gray wolf (endangered); and bald eagle, northern spotted owl, marbled murrelet; and grizzly bear (threatened).

As concluded in section V.B.3. of the EA, relicensing the project, with implementation of the proposed operation changes and enhancement measures, would not likely adversely affect any of these species. By letter dated November 12, 1996, Interior concurred with these findings.

#### IX. SECTION 4(e) FINDINGS AND CONDITIONS

Section 4(e) of the FPA 2/ requires that Commission licenses for projects located within United States reservations must include all "conditions that the Secretary of the department under whose supervision the reservation falls shall deem necessary for the adequate protection and utilization of such reservation." The Newhalem Project is located within the Ross Lake National Recreation Area, which is under the supervision of Interior.

Interior's 4(e) conditions 10/ set forth in Appendix B of this order require the City to:

- (1) maintain minimum flows in the bypassed reach of 40 cfs from November 1 through March 31; 70 cfs from April 1 through June 30; 50 cfs from July 1 through July 31; 95 cfs from August 1 through September 30; and 75 cfs from October 1 through October 30. If natural inflow to the project is less than the prescribed minimum flow, then the City shall release the natural inflow.

2/ 16 U.S.C. Section 797(e)

10/ Interior filed preliminary 4(e) conditions on August 14, 1995. By letter filed August 12, 1996, Interior modified the following two conditions: (1) condition one was modified to include language that if the natural inflow was less than the prescribed minimum flow, then the City shall release the natural inflow; and (2) condition seven was modified to allow the City to continue their current practice of moving woody debris without having to implement a new plan.

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- (2) develop a method to monitor instantaneous discharge;
- (3) design, construct, operate, and maintain a tailrace barrier, in consultation with the U.S. Fish and Wildlife Service (FWS), National Park Service (NPS), NMFS, WFW, and the Cooperative;
- (4) meet ramping rates of one inch per hour (in/hr) from June 16 through October 31; two in/hr from November 1 through February 15; two in/hr between one hour after sunset and one hour before sunrise from February 16 through June 15; and no ramping allowed between one hour before sunrise and one hour after sunset from February 16 through June 15;
- (5) start-up the project by opening the four nozzles one hour apart for a total start-up period of three hours and twenty minutes;
- (6) excavate gravel from behind the diversion dam and place it downstream using Method 3 11/ as described in the City's January 27, 1995, response to the September 2, 1994, Commission's additional information request; and
- (7) continue their current practice of moving any woody debris that accumulates behind the diversion or intake structure downstream into the bypassed reach.

The Forest Service's conditions require, among other things, that the licensee's plans in Conditions 1 and 2 be reviewed and approved by the National Park Service. Consistent with the Commission's regulatory responsibility for project structures and operations, we reserve our final approval authority on such matters through the conditions included in this license. 12/

11/ Method 3 proposed that gravel accumulations excavated from behind the diversion during low flows, estimated at 200 to 400 cubic yards annually, be placed below the diversion along the edges of the channel to be carried downstream during the high spring flows.

12/ See Commonwealth of Pennsylvania V. FERC, 868 F.2d 592 (3rd Cir. 1989); also, Northern Wasco County People's Utility District, 57 FERC 61,214 at p. 61,706 (1991), and 60 FERC 61,087 at p. 61,281 (1992).

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**X. RECOMMENDATIONS OF FEDERAL AND STATE FISH AND WILDLIFE AGENCIES**

Section 10(j)(1) of the FPA 13/ requires the Commission, when issuing a license, to include license conditions based on recommendations of federal and state fish and wildlife agencies. These recommendations are submitted pursuant to the Fish and Wildlife Coordination Act, and are intended to "adequately and equitably protect, mitigate damages to, and enhance, fish and wildlife (including related spawning grounds and habitat)" affected by the project.

If the Commission believes that any such recommendation may be inconsistent with the purposes and requirements of Part I of the FPA or other applicable law, Section 10(j)(2) requires the Commission and the agencies to attempt to resolve any such inconsistency, giving due weight to the recommendations, expertise, and statutory responsibilities of such agencies. If the Commission then does not adopt a recommendation, it must explain how the recommendation is inconsistent with applicable law and how the conditions selected by the Commission adequately and equitably protect, mitigate damages to, and enhance fish and wildlife.

This license contains conditions consistent with all recommendations made by Interior 14/ and WFW that are within the scope of Section 10(j) of the FPA. Both Interior and WFW recommend:

- (1) providing minimum instream flows of 40 cfs from November through March; 70 cfs from April through June; 50 cfs for July; 95 cfs for August and September; and 75 cfs for October, or inflow, whichever is less (condition 1 and article 403);
- (2) meet ramping rates of one inch per hour (in/hr) from June 16 through October 31; two in/hr from November 1 through February 15; two in/hr at night from one hour after sunset until one hour before sunrise from February 16 through June 15; and no ramping allowed during the day from one hour before sunrise until one hour after sunset from February 16 through June 15 (condition 3 and article 404);

13/ 16 U.S.C. 803(j)(1)

14/ Some of Interior's recommendations filed under Section 10(j) of the FPA are the same as Interior's conditions filed under Section 4(e) of the FPA.

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- (3) installing a tailrace barrier (condition 2 and article 406);
- (4) excavating gravel from the forebay and placing it at the edge of the channel below the diversion (condition 4); and
- (5) maintaining County Line Pond No.3 for fisheries management activities as determined by WFW and the Cooperative (article 409).

Interior also recommends implementing a start-up procedure for the project that would require the licensee to open the four project nozzles sequentially over 3.33 hours, which we adopted in article 404.

We made a preliminary determination that Interior's and WFW's recommendation to install a tailrace barrier may be inconsistent with the purposes and requirements of Part I of the FPA, because the need for the tailrace barrier is uncertain, and such uncertain benefits would not be worth the barrier's cost.

Since the tailrace barrier would be a permanent structure, we felt its need should be established prior to installation by evaluating fish attraction to the project's tailrace after the recommended minimum flow regime has been implemented. Interior and WFW believe, however, that a tailrace attraction study would be inconclusive because of the difficulties in observing fish in the turbulence of tailrace waters. The City agrees that a tailrace barrier is appropriate and seeks to install it without the added costs of a study. Since the barrier installation is mandatory with Interior's conditions under Section 4(e) of the FPA, we agree that the added cost of a pre-installation study is unjustified. Therefore, the license requires installation of a tailrace barrier.

The final EA recommended that County Line Pond No. 3 continue to be used for the acclimation of steelhead smolt until a new mitigation plan for operation of the pond is approved by the Commission. The Cooperative and WFW, by letters dated December 23 and 26, 1996, respectively, said that they do not want the license to require use of the pond for steelhead smolt acclimation, even as an interim measure. They also stated that the intention of their recommendation was to maintain maximum flexibility in use of the pond to respond to rapidly changing adaptive management purposes. Article 409 requires the licensee to file a plan for use of County Line Pond No. 3 for fish management activities as determined by WFW and the Cooperative, which is consistent with their management goals.

The agencies also made a number of recommendations which, because they are not recommendations for specific measures to

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protect fish and wildlife, are not within the scope of Section 10(j), but were considered under Section 10(a)(1) instead. Interior and WFW recommend that FWS and WFW have design approval for the tailrace barrier. We agree that the design should be developed in consultation with resource agencies, including FWS and WFW; however, the Commission would reserve the right to make modifications to the final design.

Interior recommends granting federal and state agency personnel access to the tailrace barrier facility for inspection and monitoring, and access to records pertaining to the construction, operation, and maintenance of the barrier. We do not object to granting agency personnel site access for the purpose of reviewing the tailrace barrier operation and records pertaining to the barrier (article 408). But because of safety reasons and property liability, we believe appropriate notification should be given to the City prior to any site visit. The Commission would determine compliance with any license requirements regarding the tailrace barrier.

WFW recommends that the City obtain Hydraulic Project Approvals from the State of Washington for the tailrace barrier construction and gravel excavation. This license sets out federal requirements and does not incorporate specific state requirements.

A detailed analysis of all of these recommendations can be found in section V of the attached final EA.

#### XI. COMPREHENSIVE PLANS

Section 10(a)(2)(A) of the FPA <sup>15/</sup> requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project. <sup>16/</sup>

Federal and state agencies filed 65 such plans with the Commission that address various resources in Washington. Of

<sup>15/</sup> 16 U.S.C. (a)(2)(a)

<sup>16/</sup> Comprehensive plans for this purpose are defined in 18 C.F.R. 2.19 (1996).

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these, eight are relevant to this project. <sup>17/</sup> No conflicts were found.

#### XII. COMPREHENSIVE DEVELOPMENT

Sections 4(e) and 10(a)(1) of the FPA <sup>18/</sup> require the Commission, in acting on applications for license, to give equal consideration to the power development purposes and to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of fish and wildlife, the protection of recreational opportunities, and the preservation of other aspects of environmental quality. Any license issued shall be such as in the Commission's judgment will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for all beneficial public uses. The decision to license this project, and the terms and conditions included herein, reflect such consideration.

The final EA analyzed the effects associated with issuing a new license to the City for the Newhalem Project, and recommended a variety of measures to protect and enhance the environmental resources.

In determining whether a proposed project will be best adapted to a comprehensive plan for developing a waterway for beneficial public purposes, pursuant to Section 10(a)(1) of the FPA, we consider a number of public interest factors, including the economic benefits of project power.

Under the Commission's approach to evaluating the economics of hydropower projects, as articulated in Mead Corporation,

<sup>17/</sup> (1) Final Supplement Environmental Impact Statement on Management of Habitat for the Late Successional and Old-growth Forest Related Species Within the Range of the Northern Spotted Owl, 1994, Forest Service, U.S. Department of Agriculture and the Bureau of Land Management, U.S. Department of the Interior; (2) Washington State Hydropower Development/Resource Protection plan, 1992, Washington State Energy Office; (3) Washington's Statewide Comprehensive Outdoor Recreation Plan, 1985, Interagency Committee for Outdoor Recreation; (4) Washington Outdoors: Assessment and Policy Plan 1990-1995, 1990, Interagency Committee for Outdoor Recreation; (5) General Management Plan: North Cascades National Park, Ross Lake National Recreation Area, and Chelan National Recreation area, 1988, National Park Service; (6) 1991 Northwest Conservation and Electric Power Plan, 1991, Northwest Power Planning Council; (7) Hydroelectric Power Assessment Guidelines, 1987, Washington Department of Fisheries; and Columbia River Basin Fish and Wildlife Program, 1994, Northwest Power Planning Council.

<sup>18/</sup> 16 U.S.C. 797(e) and 803(a)(1)

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Publishing Paper Division, <sup>19/</sup> the Commission employs an analysis that uses current costs to compare the costs of the project and likely alternative power with no forecasts concerning potential future inflation, escalation, or deflation beyond the license issuance date. The basic purpose of the Commission's economic analysis is to provide a general estimate of the potential power benefits and the costs of a project, and reasonable alternatives to project power. The estimate helps to support an informed decision concerning what is in the public interest with respect to a proposed license.

Based on current economic conditions, without future escalation or inflation, the Newhalem Project, if licensed with the conditions we have adopted, would have an annual operating cost of about \$221,000 or 18.4 mills/kWh. Using Bonneville Power Administration's priority firm rate as an alternative source of power, we estimate the annual value of the project's power to the City would be about \$345,000 annually or 28.7 mills/kWh. When we subtract the project cost from the project benefit, we find the project would have a net annual benefit of \$124,000 or 10.3 mills/kWh over the license period.

Based on review of the agency and public comments filed on this project, review of staff's evaluation of the environmental and economic effects of the proposed project and its alternatives, and our analysis pursuant to Section 10(a)(1) of the FPA, I find that the Newhalem Project will be best adapted to comprehensive development of the Skagit River Basin for beneficial public uses.

#### XIII. LICENSE TERM

Section 15(e) of the FPA <sup>20/</sup> specifies that any new license issued shall be for a term that the Commission determines to be in the public interest, but not less than 30 years nor more than 50 years from the date on which the license is issued. The Commission's policy establishes 30-year terms for projects with little or no proposed redevelopment, new construction, new capacity, or environmental mitigation and enhancement measures; 40-year terms for projects with a moderate amount of proposed redevelopment, new construction, new capacity, or environmental mitigation and enhancement measures; and 50-year terms for projects with proposed extensive redevelopment, new construction, new capacity, or environmental mitigation and enhancement measures.

<sup>19/</sup> 72 FERC 61,027 (1995)

<sup>20/</sup> 16 U.S.C. 808(E)

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Since relicensing the Newhalem Project would require only minor new construction (tailrace barrier) and enhancement measures, we are providing a license term of 30 years for the project.

#### XIV. SUMMARY

Background information, analysis of impacts, and support for related license articles, are contained in the final EA for this project.

The design of this project is consistent with the engineering standards governing dam safety. The project will be safe if operated and maintained in accordance with the requirements of this license. Analysis of related issues is provided in the Safety and Design Assessment.

#### The Director orders:

(A) This license is issued to Seattle City Light (licensee), for a period of 30 years, effective the first day of the month in which this order is issued, to operate and maintain the Newhalem Creek Hydroelectric Project. This license is subject to the terms and conditions of the Federal Power Act (FPA), which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the FPA.

(B) The project consists of:

(1) All lands, to the extent of the licensee's interests in those lands, enclosed by the project boundary as shown in the following exhibit G figures:

Exhibit	FERC No. 2705	Showing
G-1	104	Site Map
G-2	105	Project Boundary Map

(2) Project works consisting of:

- o a concrete, overflow crest dam that is 45 feet long and 10 feet high that diverts a part of the flow of Newhalem Creek;
- o a combination sluiceway/intake structure at the dam that carries flow into a 6-foot-wide by 7-foot-high, 2,700-foot-long unlined tunnel, and then into a 500-foot-long, 33-inch diameter steel penstock to the powerhouse;

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- o a 30-foot by 56-foot wood framed powerhouse;
- o a single generating unit consisting of a double-overhung Pelton impulse turbine rated at 3,000 horsepower (2,250 kW) connected to a generator rated at 2,125 kW;
- o a 350-foot-long tailrace channel, which discharges into the Skagit River;
- o a 4,387-foot-long transmission line consisting of four segments: (1) buried cable from the Newhalem powerhouse to the Skagit River crossing; (2) overhead river crossing; (3) buried cable through the town of Newhalem; and (4) overhead from the town of Newhalem to the Gorge powerhouse; and
- o accessory equipment.

These project works are more specifically described in exhibit A of the City's license application, and are shown on the following exhibit F drawings:

<u>Exhibit</u>	<u>FERC No. 2705</u>	<u>Showing</u>
F-1	101	Dam and Intake Plan and Sections
F-2	102	Tunnel and Penstock Plan Profile
F-3	103	Powerhouse Plan and Sections

(3) All of the structures, fixtures, equipment or facilities used to operate or maintain the project and located within the project boundary, all portable property that may be employed in connection with the project, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) Exhibits A, F, and G as designated in ordering paragraph (B) above are approved and made part of the license.

(D) This license is subject to the articles set forth in Form L-3 (October 1975), entitled "Terms and Conditions of License for Constructed Major Project Affecting Navigable Waters of U.S.," the conditions submitted by Interior under Section 4(e) of the FPA, attached hereto as Appendix B, and the following additional articles:

Article 201. The licensee shall pay the United States an annual charge, effective as of the first day of the month in which this license is issued, for the purpose of reimbursing the United

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States for the costs of administering Part I of the Federal Power Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 2,125 kilowatts.

Article 202. Within 45 days of the issuance of the license, the licensee shall file an original set and two complete duplicate sets of aperture cards of the approved drawings. The set of originals must be reproduced on silver or gelatin 35mm microfilm. The duplicate sets are copies of the originals made on diazo-type microfilm. All microfilm must be mounted on type D (3-1/4" x 7-3/8") aperture cards.

Prior to microfilming, the FERC Drawing Number shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number must be typed on the upper right corner of each aperture card. Additionally, the Project Number, FERC Exhibit (e.g., F-1, G-11 etc.), Drawing Title, and date of issuance of this license must be typed on the upper left corner of each aperture card.

The original and one duplicate set of aperture cards must be filed with the Secretary of the Commission, ATTN: OHL/Division of Licensing and Compliance. The second set of aperture cards shall be filed with the Commission's Portland Regional Office.

Article 301. The licensee, within 1 year from the date of issuance of this license, shall prepare and submit to the Commission a feasibility analysis of upgrading the generating capacity at the project. If the study shows upgrading the generating units to be economically feasible, the licensee shall simultaneously submit a plan and schedule for amending its license to upgrade the generating capacity of the project.

Article 401. Authority is reserved to the Commission to require the licensee to construct, operate, and maintain, or provide for the construction, operation, and maintenance of, such fishways as may be prescribed by the Secretary of the Commerce.

Article 402. The licensee shall operate the Newhalem Project in a run-of-river mode for the protection of aquatic life below the project diversion in Newhalem Creek.

The licensee shall at all times act to maintain a discharge from the project so that, at any point in time, flows as measured immediately downstream from the project diversion weir, plus the flows diverted through the project, approximate the sum of inflows to the diversion pool.



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The run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement between the licensee, the Washington Department of Fish and Wildlife, and the Skagit System Cooperative. If the run-of-river operation is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

**Article 403.** The Commission reserves the right to require changes to project operations to ensure compliance with Condition 1 in Appendix B. The flows required by Condition 1 in Appendix B of this order may be temporarily modified if required by operating emergencies beyond the control of the licensee, or for short periods upon agreement among the licensee, the Washington Department of Fish and Wildlife, and the Skagit System Cooperative. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

**Article 404.** The start-up procedure, or the ramping rate criteria in the event the powerhouse equipment has been updated, required by Condition 3 in Appendix B of this order may be temporarily modified if required by operating emergencies beyond the control of the licensee, or for short periods upon agreement among the licensee, the Washington Department of Fish and Wildlife, and the Skagit System Cooperative. If the start-up procedure or ramping rate criteria are so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

**Article 405.** Within six months of license issuance, the licensee shall file, for Commission approval, a plan to install, operate, and maintain streamflow monitoring equipment in Newhalem Creek necessary to monitor and record compliance with:

- (1) the run-of-river operation as required in article 402;
- (2) the minimum flows in the bypassed reach as required by Condition 1 in Appendix B of this order; and
- (3) the start-up procedure and ramping rate criteria as required by Condition 3 in Appendix B of this order.

The plan shall include, but not be limited to:

- (A) the method of collecting and recording data;
- (B) a schedule for installing the monitoring equipment;

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- (C) the proposed location, design, and calibration of the monitoring equipment; and
- (D) a provision for providing recorded data to the consulted agencies within 30 days from the date of an agency's request for the data.

The licensee shall prepare the monitoring plan after consultation with the U.S. Geological Survey, the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, the National Park Service, the Washington Department of Fish and Wildlife, and the Skagit System Cooperative. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. The monitoring plan shall not be implemented until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Monitoring equipment may be in concert with the streamflow monitoring equipment required by the Portland Regional Director (letter from Arthur C. Martin, Regional Director, Federal Energy Regulatory Commission, Portland Oregon to John D. Halting, Director, Civil Engineering, Seattle City Light, Seattle, Washington, dated July 5, 1990).

**Article 406.** Within six months of license issuance, the licensee shall file with the Commission for approval, a plan to design, construct, install, operate, and maintain a tailrace barrier as required by Condition 2 in Appendix B.

The plan submitted to the Commission shall include, but need not be limited to:

- (1) functional design drawings of the proposed tailrace barrier;
- (2) a schedule to construct and install the tailrace barrier; and
- (3) a description of the installation methods.

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The licensee shall prepare the plan after consultation with the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, the National Park Service, the Washington Department of Fish and Wildlife, and the Skagit System Cooperative. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. No land-clearing or land-disturbing activities shall begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 407. At least six months before the start of land-disturbing or land-clearing activities to install the tailrace barrier required by article 406 and Condition 2 in Appendix B of this order, the licensee shall file with the Commission, for approval, a plan for monitoring the effectiveness of the tailrace barrier in preventing fish in the Skagit River from entering the tailrace.

The monitoring plan shall include a schedule for:

- (1) implementation of the monitoring plan;
- (2) consultation with the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, National Park Service, the Washington Department of Fish and Wildlife, and the Skagit System Cooperative concerning the results of the monitoring; and
- (3) filing the monitoring results, agency comments, and licensee's response to agency comments with the Commission.

The licensee shall prepare the monitoring plan after consultation with the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, the National Park Service, the Washington Department of Fish and Wildlife, and the Skagit System Cooperative. The licensee shall include with the plan documentation of consultation and copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how

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the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations prior to filing the monitoring plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. The plan for monitoring the effectiveness of the tailrace barrier shall not be implemented until the licensee is notified by the Commission that the plan is approved. Upon Commission approval the licensee shall implement the plan, including any changes required by the Commission.

The Commission reserves the right to require changes to the tailrace barrier facility if the monitoring results show that the barrier does not effectively prevent anadromous fish from entering the tailrace.

Article 408. The licensee shall allow representatives of the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, the National Park Service, the Washington Department of Fish and Wildlife, and the Skagit System Cooperative, upon the showing of proper credentials, free and unrestricted access to, through, and across the project lands and the tailrace barrier site before and during construction of the tailrace barrier and operation of the tailrace barrier in the performance of their official duties, after appropriate advance notification is made. The licensee shall, upon request, furnish data and documentation of the construction, operation, and maintenance of the tailrace barrier facility and emergency situations related to the tailrace barrier to all requesting agencies within 30 days of such a request.

Article 409. Within six months of license issuance, the licensee shall file, for Commission approval, a plan to maintain County Line Pond No. 3 for fish management activities as determined by the Washington Department of Fish and Wildlife and the Skagit System Cooperative to mitigate for fish losses occurring at the project's intakes.

The plan shall include, but need not be limited to:

- (1) a detailed description of each management activity proposed for County Line Pond No. 3;
- (2) an implementation schedule with provisions for periodic review and revision;

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- (3) a monitoring program to determine the effectiveness of the plan; and
- (4) a schedule for filing the monitoring results with the Commission.

The licensee shall prepare the plan after consultation with the Washington Department of Fish and Wildlife, Skagit System Cooperative, and the U.S. Fish and Wildlife Service. The licensee shall include with the plan documentation of consultation and copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations prior to filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. The plan shall not be implemented until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

**Article 410.** Within six months of license issuance, the licensee shall file, for Commission approval, a recreation plan. The plan shall provide specific details for constructing a trail adjacent to the access road to the powerhouse to enhance hiking and interpretive opportunities in the project area. The plan shall include an implementation schedule, and provisions for constructing, operating, and maintaining the trail.

The licensee may propose alternative trail and interpretive opportunities, if consultation with the National Park Service (NPS) indicates that some alternative enhancements may provide greater benefits. The scope and magnitude of these enhancements shall be consistent with the cost of the proposed trail improvements.

The licensee shall prepare the plan after consultation with the NPS. The licensee shall include with the plan documentation of consultation and copies of comments and recommendations on the completed plan after it has been prepared and provided to the NPS, and specific descriptions of how the NPS' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the NPS to comment and to make recommendations prior to filing the plan with the Commission. If the licensee does not

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adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. The recreation plan shall not be implemented until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

**Article 411.** The licensee shall implement the Memorandum of Agreement (MOA) executed on June 28, 1996, to avoid and mitigate impacts to the historical integrity of the Newhalem Powerhouse Site, a contributing resource of the Skagit River and Newhalem Creek Hydroelectric Projects Historic District, which is eligible for inclusion in the National Register of Historic Places.

Within one year of license issuance, the licensee shall file, for Commission approval, the Historic Resources Mitigation and Management Plan (Historic Plan) identified in the MOA, together with a letter from the Washington State Historic Preservation Officer and the National Park Service (Ross Lake National Recreational Area) commenting on the Historic Plan. The Commission may require additional work and changes to the Historic Plan based on this filing.

**Article 412.** If archeological or historic sites are found during project construction or operation, the licensee shall: (1) consult with the Washington State Historic Preservation Officer (SHPO) and the National Park Service (Ross Lake National Recreational Area) (NPS) about any discovered sites; (2) prepare a cultural resources management plan and a schedule to evaluate the significance of the sites and to avoid or mitigate any impacts to sites found eligible for inclusion in the National Register of Historic Places; (3) base the plan on recommendations of the SHPO and the NPS and on the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation; (4) file the plan for Commission approval, together with the written comments of the SHPO and the NPS documenting consultation and the adequacy of the plan; and (5) take the necessary steps to protect the discovered archeological or historic sites from further impact until notified by the Commission that all of these requirements have been satisfied.

The Commission may require cultural resources survey and changes to the cultural resources management plan based on the findings. The licensee shall not implement a cultural resources management plan or begin any land-clearing or land-disturbing activities in the vicinity of any discovered sites until informed by the Commission that the requirements of this article have been fulfilled.

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**Article 413.** (A) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the license for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use and occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(B) The type of use and occupancy of project lands and water for which the licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) noncommercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 watercraft at a time and where said facility is intended to serve single-family type dwellings; (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline; and (4) food plots and other wildlife enhancement. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters which may be subject to the payment of a

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reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(C) The licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges or roads where all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-Kv or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. No later than January 31 of each year, the licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (C) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

D) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile (measured over project waters) from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and (7) other uses, if the amount of land conveyed for a particular use is five acres or less, (ii) all of the land conveyed is located at least 75 feet measured horizontally, from project waters at normal surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 60 days before conveying any interest in project lands under this paragraph (d), the licensee must submit

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a letter to the Director, Office of Hydropower Licensing, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked Exhibit G or K map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

E) The following additional conditions apply to any intended conveyance under paragraph c) or d) of this article:

(1) Before conveying the interest, the licensee shall consult with federal and state fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer.

(2) Before conveying the interest, the licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved Exhibit R or approved report on recreational resources of an Exhibit E; or, if the project does not have an approved Exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value.

(3) The instrument of conveyance must include the following covenants running with the land: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; (ii) the grantee shall take all reasonable precautions to insure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational and environmental values of the project; and (iii) the grantee shall not unduly restrict public access to protect waters.

(4) The Commission reserves the right to require the licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

F) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised Exhibit G or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not

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necessary for project purposes such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised Exhibit G or K drawings would be filed for approval for other purposes.

G) The authority granted to the licensee under this article shall not apply to any part of the public lands and or reservations of the United States included within the project boundary.

Article 501. If the licensee's project was directly benefitted by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement during the term of the original license (including extensions of that term by annual licenses), and if those headwater benefits were not previously assessed and reimbursed to the owner of the headwater improvement, the licensee shall reimburse the owner of the headwater improvement for those benefits, at such time as they are assessed, in the same manner as for benefits received during the term of this new license.

(E) The licensee shall serve copies of any Commission filing required by this order on any entity specified in this order to be consulted on matters related to that filing. Proof of service on these entities must accompany the filing with the Commission.

(F) This order is issued under authority delegated to the Director and is final unless a request for rehearing by the Commission is filed within 30 days from its issuance, as provided in Section 313(a) of the FPA. The filing of a request for rehearing does not operate as a stay of the effective date of this order or of any other date specified in this order, except as specifically ordered by the Commission. The licensee's failure to file a request for rehearing shall constitute acceptance of this license.

  
John H. Clements  
Director, Office of  
Hydropower Licensing

FEDERAL ENERGY REGULATORY COMMISSION

TERMS AND CONDITIONS OF LICENSE FOR CONSTRUCTED  
MAJOR PROJECT AFFECTING NAVIGABLE  
WATERS OF THE UNITED STATES

Article 1. The entire project, as described in this order of the Commission, shall be subject to all of the provisions, terms, and conditions of the license.

Article 2. No substantial change shall be made in the maps, plans, specifications, and statements described and designated as exhibits and approved by the Commission in its order as a part of the license until such change shall have been approved by the Commission: Provided, however, That if the Licensee or the Commission deems it necessary or desirable that said approved exhibits, or any of them, be changed, there shall be submitted to the Commission for approval a revised, or additional exhibit or exhibits covering the proposed changes which, upon approval by the Commission, shall become a part of the license and shall supersede, in whole or in part, such exhibit or exhibits theretofore made a part of the license as may be specified by the Commission.

Article 3. The project area and project works shall be in substantial conformity with the approved exhibits referred to in Article 2 herein or as changed in accordance with the provisions of said article. Except when emergency shall require for the protection of navigation, life, health, or property, there shall not be made without prior approval of the Commission any substantial alteration or addition not in conformity with the approved plans to any dam or other project works under the license or any substantial use of project lands and waters not authorized herein; and any emergency alteration, addition, or use so made shall thereafter be subject to such modification and change as the Commission may direct. Minor changes in project works, or in uses of project lands and waters, or divergence from such approved exhibits may be made if such changes will not result in a decrease in efficiency, in a material increase in cost, in an adverse environmental impact, or in impairment of the general scheme of development; but any of such minor changes made without the prior approval of the Commission, which in its judgment have produced or will produce any of such results, shall be subject to such alteration as the Commission may direct.

Article 4. The project, including its operation and maintenance and any work incidental to additions or alterations authorized by the Commission, whether or not conducted upon lands of the United States, shall be subject to the inspection and

supervision of the Regional Engineer, Federal Energy Regulatory Commission, in the region wherein the project is located, or of such other officer or agent as the Commission may designate, who shall be the authorized representative of the Commission for such purposes. The Licensee shall cooperate fully with said representative and shall furnish him such information as he may require concerning the operation and maintenance of the project, and any such alterations thereto, and shall notify him of the date upon which work with respect to any alteration will begin, as far in advance thereof as said representative may reasonably specify, and shall notify him promptly in writing of any suspension of work for a period of more than one week, and of its resumption and completion. The Licensee shall submit to said representative a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of any such alterations to the project. Construction of said alterations or any feature thereof shall not be initiated until the program of inspection for the alterations or any feature thereof has been approved by said representative. The Licensee shall allow said representative and other officers or employees of the United States, showing proper credentials, free and unrestricted access to, through, and across the project lands and project works in the performance of their official duties. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may prescribe from time to time for the protection of life, health, or property.

Article 5. The Licensee, within five years from the date of issuance of the license, shall acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, necessary or appropriate for the construction maintenance, and operation of the project. The Licensee or its successors and assigns shall, during the period of the license, retain the possession of all project property covered by the license as issued or as later amended, including the project area, the project works, and all franchises, easements, water rights, and rights or occupancy and use; and none of such properties shall be voluntarily sold, leased, transferred, abandoned, or otherwise disposed of without the prior written approval of the Commission, except that the Licensee may lease or otherwise dispose of interests in project lands or property without specific written approval of the Commission pursuant to the then current regulations of the Commission. The provisions of this article are not intended to prevent the abandonment or the retirement from service of structures, equipment, or other project works in connection with replacements thereof when they become obsolete, inadequate, or inefficient for further service due to wear and tear; and mortgage or trust deeds or judicial sales made thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.

Article 6. In the event the project is taken over by the United States upon the termination of the license as provided in

Section 15 of the Federal Power Act, or is transferred to a new licensee or to a non-power licensee under the provisions of Section 15 of said Act, the Licensee, its successors and assigns shall be responsible for, and shall make good any defect of title to, or of right of occupancy and use in, any of such project property that is necessary or appropriate or valuable and serviceable in the maintenance and operation of the project, and shall pay and discharge, or shall assume responsibility for payment and discharge of, all liens or encumbrances upon the project or project property created by the Licensee or created or incurred after the issuance of the license: Provided, That the provisions of this article are not intended to require the Licensee, for the purpose of transferring the project to the United States or to a new licensee, to acquire any different title to, or right of occupancy and use in, any of such project property than was necessary to acquire for its own purposes as the Licensee.

Article 7. The actual legitimate original cost of the project, and of any addition thereto or betterment thereof, shall be determined by the Commission in accordance with the Federal Power Act and the Commission's Rules and Regulations thereunder.

Article 8. The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative. The Commission reserves the right, after notice and opportunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may mutually agreed upon. The Licensee shall keep accurate and sufficient records of the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe.

Article 9. The Licensee shall, after notice and opportunity for hearing, install additional capacity or make other changes in the project as directed by the Commission, to the extent that it is economically sound and in the public interest to do so.

Article 10. The Licensee shall, after notice and opportunity for hearing, coordinate the operation of the project, electrically and hydraulically, with such other projects or power systems and in such manner as the Commission any direct in the interest of power and other beneficial public uses of water resources, and on such conditions concerning the equitable sharing of benefits by the Licensee as the Commission may order.

Article 11. Whenever the Licensee is directly benefited by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement, the Licensee shall reimburse the owner of the headwater improvement for such part of the annual charges for interest, maintenance, and depreciation thereof as the Commission shall determine to be equitable; and shall pay to the United States the cost of making such determination as fixed by the Commission. For benefits provided by a storage reservoir or other headwater improvement of the United States, the Licensee shall pay to the Commission the amounts for which it is billed from time to time for such headwater benefits and for the cost of making the determinations pursuant to the then current regulations of the Commission under the Federal Power Act.

Article 12. The United States specifically retains and safeguards the right to use water in such amount, to be determined by the Secretary of the Army, as may be necessary for the purposes of navigation on the navigable waterway affected; and the operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Secretary of the Army may prescribe in the interest of navigation, and as the Commission may prescribe for the protection of life, health, and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period of time, as the Secretary of the Army may prescribe in the interest of navigation, or as the Commission may prescribe for the other purposes hereinbefore mentioned.

Article 13. On the application of any person, association, corporation, Federal agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and

opportunity for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

**Article 14.** In the construction or maintenance of the project works, the Licensee shall place and maintain suitable structures and devices to reduce to a reasonable degree the liability of contact between its transmission lines and telegraph, telephone and other signal wires or power transmission lines constructed prior to its transmission lines and not owned by the Licensee, and shall also place and maintain suitable structures and devices to reduce to a reasonable degree the liability of any structures or wires falling or obstructing traffic or endangering life. None of the provisions of this article are intended to relieve the Licensee from any responsibility or requirement which may be imposed by any other lawful authority for avoiding or eliminating inductive interference.

**Article 15.** The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing.

**Article 16.** Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the Licensee shall permit the United States or its designated agency to use, free of cost, such of the Licensee's lands and interests in lands, reservoirs, waterways and project works as may be reasonably required to complete such facilities or such improvements thereof. In addition, after notice and

opportunity for hearing, the Licensee shall modify the project operation as may be reasonably prescribed by the Commission in order to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this article. This article shall not be interpreted to place any obligation on the United States to construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

**Article 17.** The Licensee shall construct, maintain, and operate, or shall arrange for the construction, maintenance, and operation of such reasonable recreational facilities, including modifications thereto, such as access roads, wharves, launching ramps, beaches, picnic and camping areas, sanitary facilities, and utilities, giving consideration to the needs of the physically handicapped, and shall comply with such reasonable modifications of the project, as may be prescribed hereafter by the Commission during the term of this license upon its own motion or upon the recommendation of the Secretary of the Interior or other interested Federal or State agencies, after notice and opportunity for hearing.

**Article 18.** So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project waters and adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreational purposes, including fishing and hunting: Provided, That the Licensee may reserve from public access such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection of life, health, and property.

**Article 19.** In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil erosion on lands adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution. The Commission, upon request or upon its own motion, may order the Licensee to take such measures as the Commission finds to be necessary for these purposes, after notice and opportunity for hearing.

**Article 20.** The Licensee shall clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. All clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative



of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

**Article 21.** Material may be dredged or excavated from, or placed as fill in, project lands and/or waters only in the prosecution of work specifically authorized under the license; in the maintenance of the project; or after obtaining Commission approval, as appropriate. Any such material shall be removed and/or deposited in such manner as to reasonably preserve the environmental values of the project and so as not to interfere with traffic on land or water. Dredging and filling in a navigable water of the United States shall also be done to the satisfaction of the District Engineer, Department of the Army, in charge of the locality.

**Article 22.** Whenever the United States shall desire to construct, complete, or improve navigation facilities in connection with the project, the Licensee shall convey to the United States, free of cost, such of its lands and rights-of-way and such rights of passage through its dams or other structures, and shall permit such control of its pools, as may be required to complete and maintain such navigation facilities.

**Article 23.** The operation of any navigation facilities which may be constructed as a part of, or in connection with, any dam or diversion structure constituting a part of the project works shall at all times be controlled by such reasonable rules and regulations in the interest of navigation, including control of the level of the pool caused by such dam or diversion structure, as may be made from time to time by the Secretary of the Army.

**Article 24.** The Licensee shall furnish power free of cost to the United States for the operation and maintenance of navigation facilities in the vicinity of the project at the voltage and frequency required by such facilities and at a point adjacent thereto, whether said facilities are constructed by the Licensee or by the United States.

**Article 25.** The Licensee shall construct, maintain, and operate at its own expense such lights and other signals for the protection of navigation as may be directed by the Secretary of the Department in which the Coast Guard is operating.

**Article 26.** If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the record address of the Licensee or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or

all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the Commission's authorized representative, as appropriate, or to provide for the continued operation and maintenance of nonpower facilities and fulfill such other obligations under the license as the Commission may prescribe. In addition, the Commission in its discretion, after notice and opportunity for hearing, may also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

**Article 27.** The right of the Licensee and of its successors and assigns to use or occupy waters over which the United States has jurisdiction, or lands of the United States under the license, for the purpose of maintaining the project works or otherwise, shall absolutely cease at the end of the license period, unless the Licensee has obtained a new license pursuant to the then existing laws and regulations, or an annual license under the terms and conditions of this license.

**Article 28.** The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.

## APPENDIX A

### DEPARTMENT OF ECOLOGY'S WATER QUALITY CERTIFICATION CONDITIONS

#### I. General Requirements

A. An Oil Spill Prevention, Containment, and Countermeasure Plan shall be prepared that covers all oil filled equipment to be installed and utilized at the site. This equipment includes the turbine/generator set, all oil filled transformers and capacitors to be installed at the project, and all mobile maintenance equipment to be utilized at the project.

B. The construction activities shall comply with all conditions of the Washington Department of Fish and Wildlife Hydraulic Project Approval if required for project construction or operations.

C. A Short Term Water Quality Standards Modification shall be obtained from the Department of Ecology prior to the start of any construction work in the waterway if required. The plan of work for the portion of the work within the waterway shall accompany the request. The request shall also include a copy of the Hydraulics Project Approval secured from the Washington Department of Fish and Wildlife for the project, and an explanation of how SEPA has been addressed for the project.

D. At the point of discharge and within the bypass reach, the waters of Newhalem Creek shall not exceed the following criteria:

1) All water quality criteria as specified in WAC 173-201A-030 for Class AA waters shall remain in effect. Nothing in this certification shall be construed as to allow the project operator to violate Washington State Water Quality laws (RCW 90.48, Chapter 173.201A WAC).

2) Toxic conditions resulting in dead or dying fish are not allowed. If these conditions exist, operation and/or construction shall cease immediately and the Department of Ecology, Northwest Regional Office shall be notified immediately by telephone at (206) 649-7000, a 24 hour number.

#### II. Instream Flow

A. The project shall comply with the instream flow requirements for Newhalem Creek as set forth by agreement with the Washington Department of Fish and Wildlife, U.S. Fish and Wildlife Service, Skagit System Cooperative and Department of Ecology. These flows are specified to be:

November 1 - March 31	40 cfs
April 1 - June 30	70 cfs
July 1 - July 31	50 cfs
August 1 - September 30	95 cfs
October 1 - October 30	75 cfs

Instream flows shall be maintained in any bypass reach or downstream of the project, sufficient to meet water quality goals and standards for the waterway, as provided in WAC Chapters 173-201A, 173-500, and Chapters 90.22 and 90.54 RCW.

#### B. Ramping

The Licensee shall administer the ramping rates for the Newhalem Creek bypass reach in accordance with the following criteria:

Season	Daylight Rates	Nighttime Rates
Feb 16 - June 15	No ramping allowed	2 inches per hour
June 16 - Oct 31	1 inch per hour	1 inch per hour
Nov 1 - Feb 15	2 inches per hour	2 inches per hour

Daylight hours are defined as one hour before sunrise to one hour after sunset. Ramping rate refers to the allowable stage of decline.

A request to modify the ramping rate conditions of this certification may be submitted to the Department of Ecology after completion of a site specific ramping study conducted in cooperation with Ecology and state and federal fish and wildlife agencies and affected Tribes.

#### III. Oil Spill Prevention and Control

A. RCW 90.56 prohibits any discharge of oil, fuel or chemicals into state waters, or onto land with a potential for entry into state waters.

B. Visible floating oils released from construction or project operation shall be immediately contained and removed from the water.

C. All oil, fuel or chemical storage tanks shall be diked and located on impervious surfaces so as to prevent spills from escaping to surface waters or ground waters of the state.

D. Fuel hoses, oil drums, oil or fuel transfer valves and fittings, etc., shall be checked regularly for drips or

leaks, and shall be maintained and stored properly to prevent spills into state waters. Proper security shall be maintained to prevent vandalism.

E. In the event of a discharge of oil, fuel or chemicals into state waters, or onto land with a potential for entry into state waters, containment and clean-up efforts shall begin immediately and be completed as soon as possible, taking precedence over normal work. Clean-up shall include proper disposal of any spilled material and used clean-up materials.

F. No emulsifiers or dispersants are to be used in waters of the state without prior approval from the Department of Ecology, Northwest Regional Office.

G. Spills into state waters, spills onto land with a potential for entry into state waters, or other significant water quality impacts, shall be reported immediately to the Department of Ecology, Northwest Regional Office at 649-7000 (24 hour phone number).

#### IV. Additional Requirements

This certification does not relieve the applicant from the responsibility of meeting applicable regulations of other agencies.

## APPENDIX B

### THE U.S. DEPARTMENT OF INTERIOR'S SECTION 4(E) CONDITIONS

#### Condition 1 -- Instream Flows

For the adequate protection and utilization of Ross Lake National Recreation Area, the Licensee shall release minimum instream flow for the Newhalem Creek bypass reach as shown in Table 1 to ensure the preservation of native Anadromous fish populations and their habitats.

This instream flow condition assumes flow accretion between the point of diversion and the anadromous zone of the bypass reach. It also recognizes that the Project is a run-of-river operation and has no storage capacity, so the minimum instream flow in the bypass reach will be set according to Table 1 or the natural flow, whichever is less.

The Licensee shall develop and implement a method to monitor instantaneous discharge near the Project diversion structure for the bypass reach in consultation with the U.S. Geological Survey. The methodology must be submitted to the National Park Service for approval within 180 days after the issuance of the license.

TABLE 1. INSTREAM FLOWS REQUIRED FOR RELEASE AT THE NEWHALEM CREEK HYDROELECTRIC PROJECT DIVERSION STRUCTURE FOR THE CONSERVATION AND PROTECTION OF THE ANADROMOUS FISH RESOURCES OF THE BYPASSED REACH OF NEWHALEM CREEK, NEWHALEM, WASHINGTON

Month	Flow Release (cfs)	Rationale
January	40	Incubation of chinook and pink redds; steelhead and Dolly Varden/bull trout rearing; chinook rearing
February	40	Incubation of chinook and pink redds; steelhead and Dolly Varden/bull trout rearing; chinook rearing
March	40	Incubation of chinook and pink redds; steelhead and Dolly Varden/bull trout rearing; chinook rearing
April	70	Steelhead spawning; steelhead and Dolly Varden/bull trout rearing; chinook rearing

May	70	Steelhead spawning; steelhead and Dolly Varden/bull trout rearing; chinook rearing
June	70	Steelhead spawning; steelhead and Dolly Varden/bull trout rearing; chinook rearing
July	50	Steelhead spawning; steelhead and Dolly Varden/bull trout rearing; chinook rearing
August	95	Chinook spawning; Steelhead incubation; steelhead and Dolly Varden/bull trout rearing
September	95	Chinook and pink spawning; steelhead and Dolly Varden/bull trout rearing
October	75	Pink and chinook spawning; chinook incubation; steelhead and Dolly Varden/bull trout rearing; chinook rearing
November	40	Chinook and pink salmon incubation; steelhead and Dolly Varden/bull trout rearing; chinook rearing
December	40	Chinook and pink salmon incubation; steelhead and Dolly Varden/bull trout rearing; chinook rearing

#### Condition 2 -- Tailrace Barrier

For adequate protection and utilization of Ross lake National Recreation Area, the Licensee shall design, construct, operate and maintain a Project tailrace barrier to prevent anadromous fish from entering the tailrace. The design must be submitted to the National Park Service for approval within 180 days after the issuance of the license. The Licensee shall consult and cooperate on every aspect with the U.S. Fish and Wildlife Service, National Park Service, National Marine Fisheries Service, Washington Department of Fish and Wildlife, and the Skagit System Cooperative (the fishery management unit of the Upper Skagit Indian Tribe, Sauk-Suiattle Tribe, and the Swinomish Tribal Community).

#### Condition 3 -- Ramping Rates

For the adequate protection and utilization of Ross lake National Recreation Area, the Licensee shall operate the project ramping

rates for the Newhalem Creek bypass reach as nearly as possible in accordance with the ramping rate criteria shown in Table 2. When the generation equipment is upgraded in the future, the Licensee shall fully comply with the ramping rate criteria shown in Table 2.

Table 2. RAMPING RATE CRITERIA (Ramping rates represent changes in stream water elevation per hour)

Period	Day	Night
February 16 - June 15	No ramping	2 inches/hour
June 16 - October 31	1 inch/hour	1 inch/hour
November 1 - February 15	2 inches/hour	2 inches/hour

The Licensee shall implement Project start-up procedures as described in the January 13, 1994, response to the Additional Information Request and as follows:

The start-up procedure would involve sequentially opening the four nozzles that drive the hydroelectric generators over a period of three hours. There are four nozzles that include two fixed nozzles (20 cfs each) and two needle valves (15 cfs each). Project start-up would initially involve a 20 cfs flow diversion. One of the 20 cfs nozzles would be opened and the other three valves would remain closed. After one hour the second fixed nozzle would open to increase flow diversion to approximately 40 cfs, if there is sufficient inflow. Two hours after the initial start-up, the first needle valve would open over a period of 20 minutes, gradually increasing the flow diversion to 55 cfs, if there is sufficient inflow. Finally, the last needle valve would open three hours after initial start-up to achieve full generation capacity of approximately 70 cfs, if there is sufficient inflow. The second needle valve would open over a 20-minute period.

#### Condition 4 -- Gravel Removal

For the adequate protection and utilization of Ross Lake National Recreation Area, the Licensee shall place gravel that accumulates in the diversion or intake structure into the Newhalem Creek bypass reach to restore and preserve gravel recruitment for anadromous fish habitats. The excavation and placement of gravel shall be accomplished using Method 3 as described in Seattle City Light's January 27, 1995, response to this September 2, 1994, Federal Energy Regulatory Commission's Additional Information Request.

**Condition 5 -- Woody Debris Removal**

For the adequate protection and utilization of Ross Lake National Recreation Area, the Licensee shall continue to place coarse woody debris that accumulates in the diversion or intake structure into the Newhalem Creek bypass reach to restore and preserve the woody debris recruitment for anadromous fish habitats. The Licensee shall not change the woody debris movement procedures without the approval of the National Park Service.

**Condition 6 -- Erosion Control**

For the adequate protection and utilization of Ross Lake National Recreation Area, the Licensee shall implement the standards and guidelines in the Newhalem Creek Hydroelectric Project Final Erosion and Drainage Control Plan (September 1992). In addition to the actions in the erosion control plan, the Licensee shall remove any debris, other than natural, that has fallen or falls in the future into Newhalem Creek from the diversion access road.